

Press release

Proof of Concept –

Consumer apps using COMPRISE features

During nearly three years of development, COMPRISE has achieved many advances on voice based, multilingual privacy-driven voice features. The components support many different languages, including English, German, French, Portuguese, Latvian, and Lithuanian with the possibility to add more. As a result of removing words or transforming voices, the privacy of spoken and written words is enhanced. Furthermore, these features are readily available to app developers and much more cost-efficient to implement than starting from scratch.

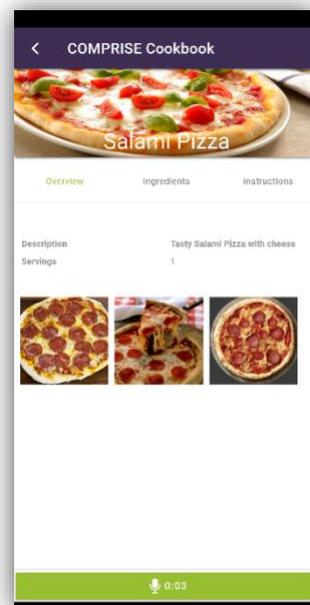
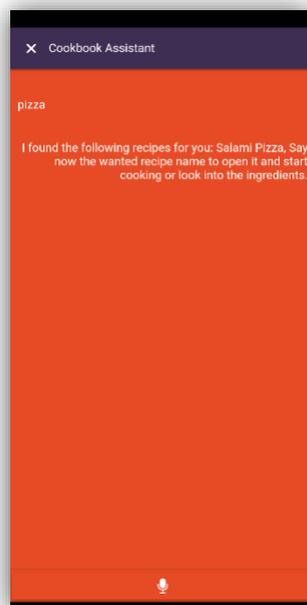
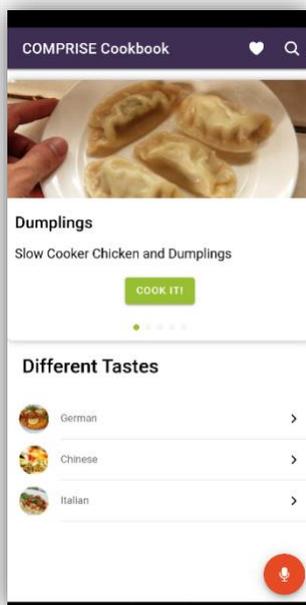
One of the main advantages for software developing companies and freelance developers to use COMPRISE is the easier, faster, and therefore more cost-efficient implementation of secure voice-based features to their app. To achieve this, the *App Wizard* as a development kit and the *Personal Server* have been implemented, tested and demonstrated by Ascora GmbH, one of the consortium partners.

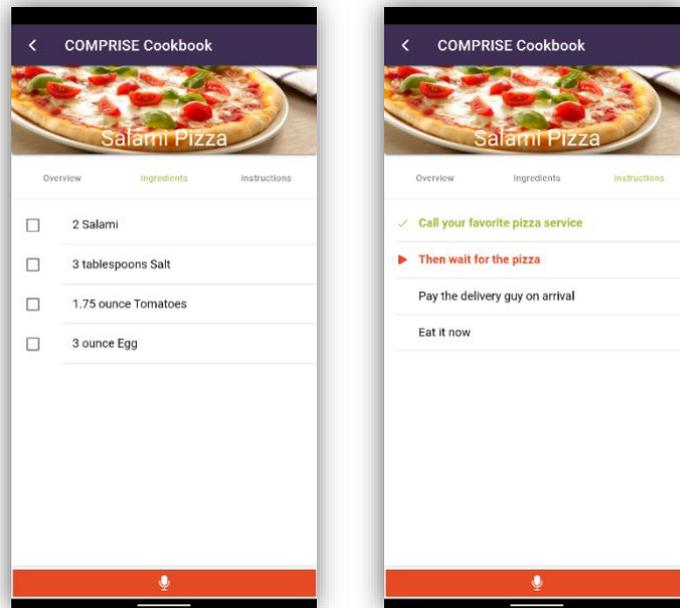
Proof of Concept apps

In accordance with our core business, here at Ascora GmbH, three consumer apps with integrated COMPRISE features have been developed.

Cookbook:

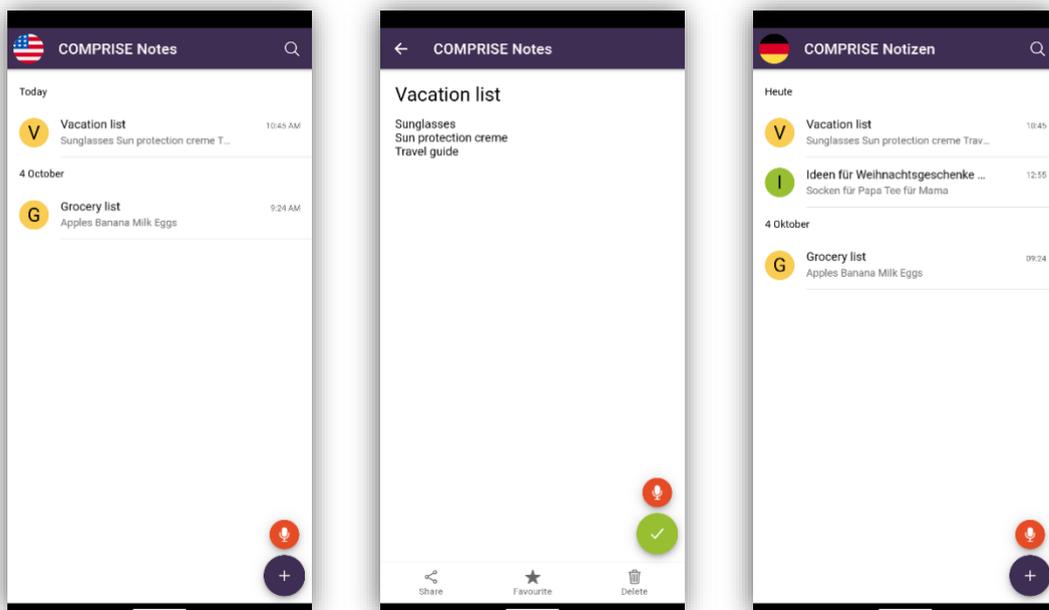
With this app, the user can search for a specific recipe or a recipe that contains a specific ingredient by either speaking (via voice command) or typing (using keyword to search). Ingredients as well as instructions can be read out by the app, so that the user has their hands and eyes free for cooking.





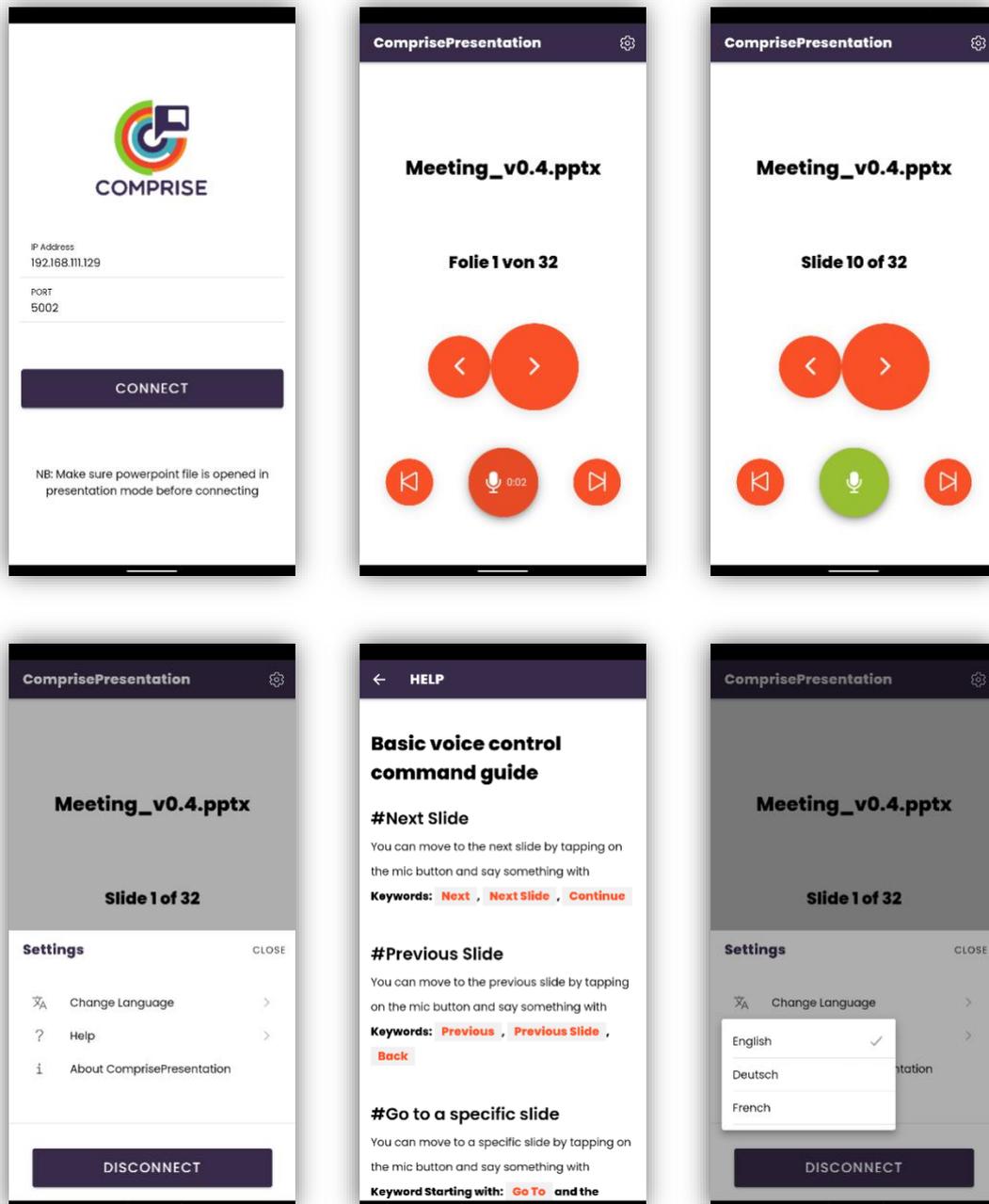
Notes:

This app allows the user to add notes via voice or through typing into the different lists. An easy switch between, in this case, English and German is possible, so that bilingual speakers can take notes in the language that they prefer at any given time. Through the voice function, notes can also be taken in situations when the user needs both hands and eyes, e.g., while driving.



Remote Control:

This app allows the user to move forwards or backwards, or to jump to a specific slide while presenting a Power Point presentation. For this app, we think that the functionality to jump via voice to a specific slide is especially useful, since it removes the need for the user to scroll through the slides to find the desired one.



From the COMPRISE project, four components have been integrated into these apps, to make these different functionalities possible. The *Speech-to-Text* component transforms the user's voice into text so that the app's dialogue manager can understand and act upon their request. With *Machine Translation*, many different languages can be easily

included in the app, since it will translate the user's language into the language that is internally used by the app's dialogue manager and translate the response back into the user's language. At the end of the process, the *Text-to-Speech* component transforms this response into speech.

In addition, the *COMPRISE Text Transformer* replaces private words, e.g., names and locations, in the *Speech-to-Text* output by non-private ones. In the future, the resulting text data might be sent to the app provider or to a trusted third party (typically, a voice technology company) to iteratively improve the dialogue manager's capability to understand a broad range of requests. Sending this data is safe because the modified text increases the privacy of the user.

Impact for developers

By using the COMPRISE solution, which includes the *COMPRISE SDK* with the *App Wizard* and the *Personal Server*, and all or some of the COMPRISE components it is possible for software development companies and freelance developers to integrate voice-based features without the specific knowledge. Nearly every developer is empowered to offer privacy-aware voice-functionality in many different languages to their customers.

As a developer it is not necessary to search for all the different components by themselves and to learn all about voice support. The COMPRISE solution also makes it easier to integrate different languages. The only requirements are good Speech-To-Text and Machine Translation models for the specific language(s). Luckily those models are already available. Unfortunately, not for all languages and not always in the best quality, but the numbers are increasing and will continue to do so.

With this simplification development becomes faster. Of course, not faster than without voice-based features, but faster than with self-implemented and self-trained voice-features. This is especially important for software development companies like Ascora GmbH, to make savings in costs while keeping up with the trends and requests from our customers. Furthermore, it allows us the option to offer new features and even new apps to our own customers.

Follow the COMPRISE achievements on the project's website:

<https://www.compriseh2020.eu/>

Additionally, you can reach us via our social media accounts:

LinkedIn: <https://www.linkedin.com/company/comprise-h2020>

Twitter: <https://twitter.com/compriseh2020>